

Listing of Claims:

1. (currently amended) A method comprising:
identifying a bitrate ~~template~~ histogram associated with multimedia content to
be transmitted to a multimedia node; and
~~transmitting said multimedia content at a particular bitrate to a multimedia~~
~~node, said particular bitrate based on bitrate data in said bitrate template~~
changing a bandwidth allocation for the multimedia node in anticipation of a
future bitrate spike indicated in the bitrate histogram.

2. (currently amended) The method as in claim 1 wherein identifying
comprises:

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locating said bitrate ~~template~~ histogram in a database using multimedia
content identification data.

3. (original) The method as in claim 2 wherein said identification data is a
serial number associated with said multimedia content.

4. (original) The method as in claim 2 wherein said identification data is a
checksum of a known unique portion of said multimedia content

5. (original) The method as in claim 2 wherein said database is
maintained on a remote server.

6. (currently amended) The method as in claim 1 further comprising:
filling an input buffer at said multimedia node by a particular amount in
anticipation of [[a]] the future bitrate spike indicated in said bitrate template
histogram.

7. (currently amended) The method as in claim 6 wherein filling said input
buffer comprises increasing said particular a bitrate of the multimedia content to a
second, higher bitrate.

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8. (currently amended) A method for providing efficient bandwidth
allocation on a bandwidth-limited network comprising:
receiving a request for multimedia content from a first multimedia node;
allocating a first amount of bandwidth to supply said multimedia content to
said multimedia node; and
dynamically adjusting said first amount of bandwidth based on a template of
bitrate data as a function of time indicating changes in bitrate requirements of said
multimedia content, wherein said adjusting is done prior to the occurrence of said
changes.

9. (currently amended) The method as in claim 8 wherein said template of
bitrate data as a function of time is retrieved from a bitrate template database.

10. (currently amended) The method as in claim 9 wherein said template of bitrate data as a function of time is identified in said template database using identification data associated with said multimedia content.

11. (original) The method as in claim 10 wherein said identification data is a serial number associated with said multimedia content.

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12. (currently amended) The method as in claim 8 further comprising:
dynamically adjusting said first amount of bandwidth based on a template of bitrate data as a function of time indicating changes in bitrate requirements of multimedia content requested by a second multimedia node.

13. (original) The method as in claim 8 wherein said multimedia content is a digital video disk ("DVD").

14. (original) The method as in claim 8 wherein said first amount of bandwidth is dynamically adjusted upward to fill a buffer at said first multimedia node by a particular amount in anticipation of an increase in bitrate requirements for said multimedia content.

15. (original) The method as in claim 12 wherein said first amount of bandwidth is dynamically adjusted upward to fill a buffer at said first multimedia node

by a particular amount in anticipation of an increase in bitrate requirements for multimedia content transmitted to said second multimedia node.

16. (original) The method as in claim 8 wherein said first amount of bandwidth is maintained until a buffer at said first multimedia node is filled with said multimedia content.

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17. (original) The method as in claim 16 wherein said first amount of bandwidth is maintained until another multimedia node requires additional bandwidth.

18. (currently amended) A system comprising:
home media server configured to allocate a first amount of bandwidth to supply multimedia content to a first multimedia node and to dynamically adjust said first amount of bandwidth based on a template histogram of bitrate data indicating changes in bitrate requirements of multimedia content, wherein the first amount of bandwidth is dynamically adjusted prior to the occurrence of said changes.

19. (currently amended) The system as in claim 18 wherein said home media server retrieves said template histogram based on identification data associated with said multimedia content.

20. (original) The system as in claim 19 wherein said identification data is a serial number associated with said multimedia content.

21. (currently amended) The system as in claim 18 wherein said home media server is further configured to:

dynamically adjust said first amount of bandwidth based on a template histogram of bitrate data indicating changes in bitrate requirements of multimedia content requested by a second multimedia node.

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22. (original) The system as in claim 18 wherein said multimedia content is a digital video disk ("DVD").

23. (original) The system as in claim 18 wherein said home media server is further configured to dynamically adjust said first amount of bandwidth upward to fill a buffer at said first multimedia node by a particular amount in anticipation of an increase in bitrate requirements for said multimedia content.

24. (original) The system as in claim 18 wherein said home media server is further configured to dynamically adjust said first amount of bandwidth upward to fill a buffer at said first multimedia node by a particular amount in anticipation of an increase in bitrate requirements for multimedia content transmitted to a second multimedia node.

25. (original) The system as in claim 18 wherein said home media server is further configured to maintain said first amount of bandwidth until a buffer at said first multimedia node is filled with said multimedia content.

26. (original) The system as in claim 18 wherein said home media server is further configured to maintain said first amount of bandwidth until another multimedia node requires additional bandwidth.

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27. (new) A method comprising:

identifying a bitrate histogram associated with multimedia content to be transmitted to a multimedia node; and

delaying a start time for the multimedia content on the multimedia node for a particular period in anticipation of a future bitrate spike indicated in the bitrate histogram.

28. (new) The method of claim 27, wherein delaying comprises pre-buffering a particular amount of the multimedia content at the multimedia node in order to accommodate the future bitrate spike without interruption of the media content.

29. (new) A method for providing efficient bandwidth allocation on a bandwidth-limited network comprising:

receiving a request for a first set of multimedia content from a first multimedia node;

identifying a first bitrate histogram associated with the first set of multimedia content;

allocating a particular amount of bandwidth to supply the first set of multimedia content to the first multimedia node based on the first bitrate histogram;

identifying a second bitrate histogram associated with a second set of multimedia content to be transmitted to a second multimedia node, the second bitrate histogram indicating a future spike in bandwidth requirements for the second set of multimedia content; and

throttling back the bandwidth allocated to the first set of multimedia content just prior to encountering the bandwidth spike associated with the second set of multimedia content at a time sufficient to fill.

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